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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,764	07/28/2003	Michele Bortolotti	240316US0XCONT	4415
22850	7590	01/13/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			SELLERS, ROBERT E	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,764

Applicant(s)

BORTOLOTTI ET AL.

Examiner

Robert Sellers

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16, 18, 19 and 22-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16, 18, 19 and 22-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

1. The limitation of the species of elastomer to diene homopolymers and copolymers in independent claims 23 and 24 as supported by page 8, line 12 of the specification overcomes the 35 U.S.C. 112, second paragraph, rejection.

The text of section 103(a) of 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 16, 18, 19 and 22-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent No. 654,364; Hsieh et al. Patent No. 4,341,672 and Terakawa et al. Patent No. 5,569,690.

The rejection is maintained for the reasons of record set forth in the non-Final rejection mailed September 29, 2005. The arguments filed December 22, 2005 have been considered but are unpersuasive.

2. Hsieh et al. discloses silica in column 4, line 42. Terakawa et al. sets forth the inclusion of a reinforcing agent or a filler (col. 4, lines 64-65) which embraces such a conventional species as the silica of the European patent or Hsieh et al. Based on the equivalent compositions of the European patent (translation, page 4, lines 19-24), Hsieh et al. (col. 4, lines 37-42 and col. 5, lines 4-6) and Terakawa et al. (col. 1, lines 9-11; col. 3, lines 22-23 and col. 4, lines 64-65) containing epoxidized diene rubbers, non-epoxidized rubbers and fillers such as silica utilized for the same purpose as a tire tread, the teachings of Hsieh et al. and Terakawa et al. are entirely relevant to the European patent.

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3. The European patent espouses an epoxidized diene rubber containing at least 20% of oxirane groups (translation, page 5, lines 22-25). The basis for the percentage is not disclosed. Furthermore, the characterization of such a range as "especially advantageous" opens the levels of epoxidation to values such as the parameters of as little as 5% of epoxidation of olefinically unsaturated sites set forth in Hsieh et al. (col. 4, lines 18-23) or preferably from about 0.1 to 60 epoxy groups per 100 monomer units (col. 3, lines 9-18) of Terakawa et al.

4. The declaration filed February 4, 2005 in Tables 1 and 2 on pages 4 and 5 provides a comparison between Compound M1-A2 wherein Copolymer A2 contains 50.2% vinyl groups and 5% epoxidation, and Compound M1-A4 wherein Copolymer A4 possesses 50.3% vinyl groups and 11% epoxidation. Such a comparison establishes the criticality of the claimed upper limit of epoxidation degree with respect to hardness, abrasion loss and the ratio of $\text{Tan } \delta$ 1Hz, 0.1% strain, 0°C to $\text{Tan } \delta$ 1Hz, 5% strain, 60°C. However, the evidence is not commensurate in scope with the claims since the claimed minimum of 2.27% is not substantiated by Compound M1-A6 since Copolymer A6 with an epoxidation degree of 2.27% has a significantly higher vinyl content of 64.9% than the 50.2% and 50.3% of Copolymers A2 and A4, respectively. It cannot be ascertained whether the unexpected results are a function of the lower epoxidation degree or the higher vinyl content.

5. The Ultrasil VN3 exhibited in Table 1 on page 5 of the German patent itself is confirmed to be silica according to Chemical abstracts registry no. 7631-86-9, page 4, line 33. Such a documented identification of an actual exemplified trade name is more reliable than the opinion that "Kieselsaure" is translated as silicic acid.


THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

rs 1/4/2006



ROBERT E.L. SELLERS
PRIMARY EXAMINER